

1 This listing of claims will replace all prior versions, and listings, of claims in the
2 application:

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4 **Listing of Claims:**

5
6 1. (previously presented) A method for generating a dump file, the
7 method comprising:

8 a. generating a dump file that does not include all operating system
9 data by gathering at least:

10 i. thread information for at least one running thread,

11 ii. context information for the thread,

12 iii. callstack information for the thread,

13 iv. process information for a process in which the thread
14 is running, and

15 v. information identifying a reason for generating the
16 dump file; and

17 b. storing the dump file to a storage medium.

18
19 2. (previously presented) The method as recited in Claim 1, further
20 comprising determining when to generate the dump file.

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22 3. (original) The method as recited in Claim 1, wherein generating
23 the dump file further includes gathering processor information about at
24 least one processor.
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 - 2 4. (original) The method as recited in Claim 2, wherein determining
 - 3 when to generate the dump file further includes determining that an
 - 4 exception has occurred.
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 - 6 5. (previously presented) The method as recited in Claim 1, wherein the
 - 7 dump file does not include data stored in global initialized memory.
 - 8
 - 9
 - 10 6. (previously presented) The method as recited in Claim 1, wherein the
 - 11 dump file does not include data stored in uninitialized memory.
 - 12
 - 13 7. (previously presented) The method as recited in Claim 1, wherein the
 - 14 dump file does not include executable instructions used by a processor
 - 15 to execute a program.
 - 16
 - 17 8. (previously presented) The method as recited in Claim 1, wherein the
 - 18 dump file is a kernel minidump file associated with an operating system
 - 19 and the at least one running thread is the single thread which
 - 20 encountered an exception.
 - 21
 - 22 9. (previously presented) The method as recited in Claim 8, wherein the
 - 23 callstack information includes kernel stack information.
 - 24
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10. (previously presented) The method as recited in Claim 1, wherein the process information identifies a process that initiated the thread.
11. (previously presented) The method as recited in Claim 1, further comprising:
- allocating a buffer space in memory during an initialization process, wherein the buffer space is suitable for storing the gathered information; and
 - reserving space on the storage medium suitable for writing the contents of the buffer space.
12. (previously presented) The method as recited in Claim 11, wherein generating the dump file further includes initially storing the thread information, the context information, the callstack information, the process information, and the information identifying the reason for generating the dump file to the buffer space, and then copying the dump file from the buffer space to the storage medium as a minidump file.
13. (previously presented) The method as recited in Claim 12, further comprising upon re-initialization, after having stored the minidump file to the storage medium, accessing the minidump file on the storage medium and using at least a portion of the minidump file to further understand an exception that was at least one reason for generating the minidump file.

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2 14. (original) The method as recited in Claim 1, wherein the dump
3 file is a user minidump file associated with at least one non-operating
4 system program.

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6 15. (original) The method as recited in Claim 1, wherein generating
7 the dump file further includes gathering callstack information for all
8 running threads.

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10 16. (previously presented) The method as recited in Claim 15, wherein the
11 callstack information includes a user callstack.

12
13 17. (original) The method as recited in Claim 1, wherein generating
14 the dump file further includes gathering processor context information
15 for all running threads.

16
17 18. (previously presented) The method as recited in Claim 1, wherein
18 generating the dump file further includes gathering a listing of loaded
19 modules for a faulting application program.

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21 19. (original) The method as recited in Claim 1, wherein the dump
22 file is a directory indexed file that uses relative virtual addresses
23 (RVAs).
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20. (previously presented) A computer-readable medium having computer-executable instructions for causing at least one processor to perform acts comprising:

gathering dump file information that does not include all operating system data but does include at least thread information for at least one running thread, context information for the thread, callstack information for the thread, process information for the process in which the thread is running, and information identifying a reason for generating the dump file; and generating a dump file using the dump file information.

21. (original) The computer-readable medium as recited in Claim 20, wherein generating the dump file further includes storing the dump file to a storage medium.

22. (previously presented) The computer-readable medium as recited in Claim 20, wherein gathering the dump file information further includes gathering processor information about at least one processor.

23. (previously presented) The computer-readable medium as recited in Claim 20, having further computer-executable instructions for causing the at least one processor to perform acts comprising determining when to generate the dump file.

24. (previously presented) The computer-readable medium as recited in Claim 20, wherein the dump file does not include data stored in global initialized memory.

25. (previously presented) The computer-readable medium as recited in Claim 20, wherein the dump file does not include data stored in uninitialized memory.

26. (previously presented) The computer-readable medium as recited Claim 24 wherein the dump file does not include executable instructions used by the at least one processor to execute a program.

27. (previously presented) The computer-readable medium as recited in Claim 20, wherein the dump file is a kernel minidump file associated with an operating system and the at least one running thread is the single thread which encountered an exception.

28. (previously presented) The computer-readable medium as recited in Claim 20, wherein the callstack information includes kernel stack information.

29. (previously presented) The computer-readable medium as recited in Claim 20, wherein the process information identifies a process that initiated the thread.

30. (previously presented) The computer-readable medium as recited in Claim 20, further comprising computer-executable instructions for causing the at least one processor to perform acts comprising:

allocating a buffer space in memory during an initialization process, wherein the buffer space is suitable for storing the dump file information; and

reserving space on a storage medium drive suitable for writing the contents of the buffer space.

31. (previously presented) The computer-readable medium as recited in Claim 30, wherein generating the dump file further includes initially storing the thread information, the context information, the callstack information, the process information, and the information identifying the reason for generating the dump file to the buffer space, and then copying the dump file from the buffer space to the storage medium as a minidump file.

32. (previously presented) The computer-readable medium as recited in Claim 31, further comprising computer-executable instructions for causing the at least one processor to perform acts comprising, upon re-initialization after having stored the minidump file to the storage medium, accessing the minidump file on the storage medium and using at least a portion of the minidump file to further understand an exception that was at least one reason for generating the minidump file.

33. (original) The computer-readable medium as recited in Claim 20, wherein the dump file is a user minidump file associated with at least one non-operating system program.

34. (previously presented) The computer-readable medium as recited in Claim 20, wherein gathering the dump file information further includes gathering callstack information for all running threads.

35. (previously presented) The computer-readable medium as recited in Claim 34, wherein the callstack information includes a user callstack.

36. (previously presented) The computer-readable medium as recited in Claim 20, wherein gathering the dump file information further includes gathering processor context information for all running threads.

37. (previously presented) The computer-readable medium as recited in Claim 20, wherein gathering the dump file information further includes gathering a listing of all loaded modules for the faulting application program.

38. (original) The computer-readable medium as recited in Claim 20, wherein the dump file is a directory indexed file that uses relative virtual addresses (RVAs).

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2 39. (previously presented) An apparatus comprising;
3 memory;
4 a data storage drive configured to write data files to at least one data
5 storage medium; and
6 at least one processor operatively coupled to the memory and the data
7 storage drive and configured to:
8 a. generate a dump file that does not include all operating system
9 data by gathering in the memory at least:
10 i. thread information for at least one running thread,
11 ii. context information for the thread,
12 iii. callstack information for the thread,
13 iv. process information for the process in which the thread is
14 running, and
15 v. information identifying a reason for generating the dump
16 file; and
17 b. store the dump file to the storage medium.
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19 40. (previously presented) The apparatus as recited in Claim 39, wherein
20 the at least one processor is further configured to determine when to
21 generate the dump file.
22
23 41. (previously presented) The apparatus as recited in Claim 39, wherein
24 the at least one processor is further configured to gather processor
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1 information about the at least one processor and include the processor
2 information in the dump file.
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4 42. (previously presented) The apparatus as recited in Claim 40, wherein
5 the at least one processor is further configured to determining when to
6 generate the dump file based on an exception.
7

8 43. (previously presented) The apparatus as recited in Claim 39, wherein
9 the dump file does not include data stored in global initialized
10 memory.
11

12 44. (previously presented) The apparatus as recited in Claim 39, wherein
13 the dump file does not include data stored in uninitialized memory.
14

15 45. (previously presented) The apparatus as recited Claim 39 wherein the
16 dump file does not include executable instructions used by the at least
17 one processor to execute a program.
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19 46. (previously presented) The apparatus as recited in Claim 39, wherein
20 the dump file is a kernel minidump file associated with an operating
21 system and the at least one running thread is the single thread which
22 encountered an exception.
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24 47. (previously presented) The apparatus as recited in Claim 39, wherein
25 the callstack information includes kernel stack information.

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2 48. (previously presented) The apparatus as recited in Claim 39, wherein
3 the process information identifies a process that initiated the thread.

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5 49. (previously presented) The apparatus as recited in Claim 39, wherein
6 the at least one processor is further configured to:

7 allocate a buffer space in the memory during an initialization
8 process; and

9 reserve space on the storage medium drive suitable for writing the
10 contents of the buffer space.

11
12 50. (previously presented) The apparatus as recited in Claim 49, wherein
13 the at least one processor is further configured to:

14 generate the dump file by initially storing the thread information, the
15 context information, the callstack information, the process information,
16 and the information identifying the reason for generating the dump file
17 to the buffer space, and then copying the dump file from the buffer
18 space to the storage medium as a minidump file.

19
20 51. (previously presented) The apparatus as recited in Claim 50, wherein
21 the at least one processor is further configured to, upon re-initialization
22 after having stored the minidump file to the storage medium, access the
23 minidump file on the storage medium and use at least a portion of the
24 minidump file to further understand an exception that was at least one
25 reason for generating the minidump file.

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2 52. (previously presented) The apparatus as recited in Claim 39, wherein
3 the dump file is a user minidump file associated with at least one non-
4 operating system program.

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6 53. (previously presented) The apparatus as recited in Claim 39, wherein
7 the at least one processor is further configured to gather callstack
8 information for all running threads as part of the dump file.

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10 54. (previously presented) The apparatus as recited in Claim 53, wherein
11 the callstack information includes a user callstack.

12
13 55. (previously presented) The apparatus as recited in Claim 39, wherein
14 the at least one processor is configured to gather processor context
15 information for all running threads as part of the dump file.

16
17 56. (previously presented) The apparatus as recited in Claim 39, wherein
18 the at least one processor is configured to gather a listing of all loaded
19 modules for a faulting application program as part of the dump file.

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21 57. (previously presented) The apparatus as recited in Claim 39, wherein
22 the dump file is a directory indexed file that uses relative virtual
23 addresses (RVAs).

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25 58-66. (canceled)

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2 67. (previously presented) The method as recited in Claim 1, further
3 comprising providing the dump file to at least one external device.

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5 68. (previously presented) The method as recited in Claim 12, upon system
6 re-initialization, transferring the dump file from the storage medium to
7 at least one external device.

8
9 69. (previously presented) The method as recited in Claim 1, wherein
10 generating the dump file further includes gathering a list of loaded
11 modules.

12
13 70. (previously presented) The computer-readable medium as recited in
14 Claim 20, having further computer-executable instructions for causing
15 the at least one processor to perform acts comprising providing the
16 dump file to at least one external device.

17
18 71. (previously presented) The computer-readable medium as recited in
19 Claim 30, having further computer-executable instructions for causing
20 the at least one processor to perform acts comprising, upon system re-
21 initialization, transferring the dump file from the storage medium to at
22 least one external device.

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72. (previously presented) The computer-readable medium as recited in Claim 20, wherein gathering the dump file information further includes gathering a list of loaded modules.

73. (previously presented) The apparatus as recited in Claim 39, wherein the at least one processor is further configured to provide the dump file to at least one external device.

74. (previously presented) The apparatus as recited in Claim 49, wherein the at least one processor is further configured to, upon system re-initialization, transferring the dump file from the storage medium to at least one external device.

75. (previously presented) The apparatus as recited in Claim 39, wherein the at least one processor is further configured to gather a list of loaded modules as part of the dump file.

76-77. (canceled)